

Date: **November 14, 2003**

16367 111403 U.S. PTO  
Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**NEW APPLICATION TRANSMITTAL**

Transmitted herewith for filing is the patent application of

Inventor(s): (1) Robert R. HAYES

NOTE: Patent must be applied for in the name of all  
of the actual inventor or inventors.For: "METHOD AND APPARATUS FOR GENERATING TWO FREQUENCIES HAVING A  
FREQUENCY SEPARATION EQUAL TO THE ATOMIC FREQUENCY OF AN ATOMIC  
SPECIES"

Enclosed are:

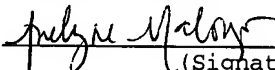
**1. The Papers Required For Filing Date Under 37 CFR 1.53(b):**11 Pages of specification    1 Page of abstract    4 Pages of claims5 Sheets of drawings    ☒ formal    ☐ informal  
(Figs. 1-5)☒ In addition to the above papers there is also attached☐      Pages of a Preliminary Amendment dated                 ☒ Postcard☒ Check for filing fee in the amount of \$ 788.00☒ Declaration/Power of Attorney (4 pages)☐ Verified Statement Claiming Small Entity Status--  
Small-Business Concern (1 page)☐ Cross-Reference to Related Application(s) (1 page)☒ Claim To Priority (1 page) with☐ Certified Copy of --- Application No. ---☒ Information Disclosure Statement (2 pages) and  
Form PTO-1449 (modified) (1 page), with copies of documents  
cited in Form PTO-1449 (modified)☒ Assignment Cover Sheet (1 page), Assignment document (2 pages),  
and Check for \$40.00**CERTIFICATION UNDER 37 CFR 1.10**

I hereby certify that this paper and the documents referred to as enclosed  
therein are being deposited with the United States Postal Service in an Express  
Mail envelope with sufficient postage for Express Mailing on this date **November  
14, 2003** in an envelope as "Express Mail Post Office to Addressee" Mailing Label  
Number **EV301025143US** addressed to the:

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Avelyne Malonzo

(Typed or printed name of person mailing paper)



(Signature of person mailing paper)

NOTE: Each paper or fee referred to as enclosed herein  
has the number of the "Express Mail" mailing label  
placed thereon prior to mailing. 37 CFR 1.10(b).

## 2. Declaration or oath

☒ Enclosed

☒ original ☐ facsimile

executed by:

☒ inventor(s)

☐ legal representative of inventor(s) 37 CFR 1.42 or 1.43

☐ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached. 37 CFR 1.47.

☐ petition and statement required by 37 CFR 1.47 also attached. See item 7 below for fee.

☐ Not Enclosed

☐ Application is made by a person authorized under 37 CFR 1.41(c) on behalf of all of the above named inventor(s). The declaration or oath, along with the surcharge required by 37 CFR 1.16(e) can be filed subsequently.

☐ Showing that the filing is authorized: (Not required unless called into question. 37 CFR 1.41(d)).

NOTE: Where the filing is a completion in the U.S. of an international application under 35 U.S.C. 371(c)(4) then the declaration must be filed.

## 3. Assignment

☒ An assignment of the invention to HRL LABORATORIES, LLC  
(with separate cover sheet and separate check for \$40.00)

## 4. Certified Copy

☐ A certified copy of Application No.  
from which priority is claimed.

NOTE: Must be referred to in oath or declaration. 37 CFR 1.55 and 163.

## 5. Fee Calculation

CLAIMS		AS FILED		
Number Filed		Number Extra	Rate	Basic Fee \$ 770.00
Total Claims	21 -20=	1 x	\$ 18.00	18.00
Independent Claims	3 -3=	0 x	\$ 86.00	0
Multiple Dependent Claim(s), If Any		0 x	\$290.00	0

☐ Amendment canceling extra claims enclosed

☐ Amendment deleting multiple dependencies enclosed

☐ Fee for extra claims is not being paid at this time

NOTE: If the fee for extra claims are not paid on filing they must be paid or the claims canceled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency, 37 CFR 1.16(d).

Filing Fee Calculation \$ 788.00

6. Small Entity Statement

- ☐ Verified statement that this is a filing by a small entity under 37 CFR 1.9 and 1.27.

Filing Fee Calculation (50% of above) \$ \_\_\_\_\_

NOTE: If a verified statement is filed within 2 months of the date of payment of first fee then the excess fee paid will be refunded on request. Notice of January 20, 1983. 1027 TMOG 114.

7. Fee Payment Being Made At This Time

- ☐ Not Enclosed

- ☐ No filing fee is submitted. This and the surcharge required by 37 CFR 1.16(e) can be paid subsequently.

NOTE: Where the filing is a completion in the U.S. of an international application the fee must be paid.

- ☒ Enclosed

☒ filing fee \$ 788.00

☐ recording assignment (\$40.00; 37 CFR 1.21(h)(i)) \$ \_\_\_\_\_

☐ petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached. 37 CFR 1.47 and 1.17 (h) \$ \_\_\_\_\_

Total fees enclosed \$ 788.00

8. Method of Payment of Fees

- ☒ check in the amount of \$ 788.00

- ☐ charge account No. 12-0415 in the amount of \$ \_\_\_\_\_  
A duplicate of this transmittal is attached.

NOTE: Fees should be itemized in such a manner that it is clear for which purpose the fees are paid. 37 CFR 1.22(b).

9. Authorization to Charge Additional fees

- ☒ The Commissioner is hereby authorized to charge the following additional fees which may be required to Account No. 12-0415:

☒ 37 CFR 1.16 (filing fees and presentation of extra claims)

☒ 37 CFR 1.17 (application processing fees)

☐ 37 CFR 1.18 (issue fee at or before Mailing of Notice of Allowance, pursuant to 37 CFR 1.311(b))

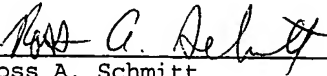
NOTE: 37 CFR 1.28(b) requires "Notification of any change in loss of entitlement to small entity status must be filed in the application...prior to paying... issue fee".

10. Instructions As To Overpayment

- ☒ Credit Account No. 12-0415 ☐ refund

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